DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,

AURANGABAD.

REVISED SYLLABUS OF

B.Sc. THIRD & FOURTH SEMESTER

GEOGRAPHY (OPTIONAL)

(With Credit System)

(Effective from – June 2010 onwards)

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

B.Sc. Geography (Optional) Course Structure in Semester System

B.Sc. Second Year

Semester	Course Code	Paper Number	Title of Paper	Credits	Marks
III	GEOG - 301	Paper-IX	CLIMATOLOGY	03	50
	GEOG - 302	Paper-X	POPULATION GEOGRAPHY	03	50
	GEOG - 303	Paper-XI	Practical Paper –V	1.5	50
	GEOG - 304	Paper-XII	Practical Paper –VI	1.5	50
IV	GEOG - 401	Paper-XIII	OCEANOGRAPHY	03	50
	GEOG - 402	Paper-XIV	SETTLEMENT GEOGRAPHY	03	50
	GEOG - 403	Paper-XV	Practical Paper –VII	1.5	50
	GEOG - 404	Paper-XVI	Practical Paper –VIII	1.5	50

Note: For Theory Paper, 1 Credit = 15 Periods;

For Practical Paper, 1 Credit = 30 Periods

B.SC. – II, SEMISTER – III

PAPER – IX

CLIMATOLOGY

Marks : 50 Periods: 45 Credits: 03

Unit – I **(10)** [**0.6 credits**]

Weather and Climate – Definition, nature and scope Of Climatology, Significance of Climatology, Composition and structure of Atmosphere, weather & climate.

Unit – II **(10)** [**0.6 credits**]

Insolation and Temperature - Definition of Insolation and Temperature, Heat budget Of the Earth, Factors affecting the distribution of Solar energy, Distribution of Temperature –Vertical and Horizontal, Range of Temperature.

Unit – III **(10)** [**0.6 credits**]

Atmospheric Pressure and Winds - Evaporation and Condensation, Hydrological cycle, Types of precipitation, World pattern of rainfall. Regional and seasonal distribution, Air Masses and Fronts: Concept, Classification and properties. Atmospheric disturbance: Tropical and Temperate cyclones : thunderstorms and tornadoes.

Unit – IV **(10)** [**0.6 credits**]

Role of Climate in human life - Atmospheric Pollution and Global Warming, General causes, consequences and measures of control.

Recommended Books –

1. Barry R.G. and Chlorley R.J. : Atmosphere, Weather and Climate, Routledge.1998.
2. Critch Field H. : General Climatology, Prentice, Hall, New York, 1975.

3. Lydolph, Paul, E. : The Climate of the Earth, Rowman and Allanheld, Totowa N.J. 1985.
4. Triwartha G.T. : An Introduction to Climate, International Student's edition, McGraw-Hill, New York, 1974.

B.SC. – II, SEMISTER – III
PAPER – X

POPULATION GEOGRAPHY

Marks : 50 **Periods: 45** **Credits: 03**

Unit – I **(10)** [**0.6 credits**]

Population Geography – Definition, nature, scope and Significance, Sources of population data.

Unit – II **(15)** [**1.0 credits**]

Distribution of population – Factors affecting on population distribution and density. Population distribution patterns – World and India. Densely, moderately and sparsely population regions of the World.

Unit – III **(10) [0.8 credits]**

Composition of Population – Age and sex composition, rural – urban composition, Economic composition; determinants, World regional patterns; Composition of population in India.

Unit – IV **(10)** [**0.6 credits**]

Migration –Meaning, classification, determinants and consequences of migration, Migration in India.

Recommended Books –

1. Beaujeu Garnier J.: Geography of Population, Longman, London, 1966.
2. Chandana R.C. : Geography of Population, Kalyani Pub. Ludhiyana, 1988.
3. Clark John I. : Population Geography, Permagon press, New York, 1965.
4. Ghosh B.N. : Fundamentals of Population Geography.

5. Peters G.L. and Larkim R.P. : Population Geography – Problems, concepts and prospects, Kendele Hunt Lowa, 1979.
6. Sawant and Athawale A.S. : Population Geography, Mehta, Kolhapur.
7. Smith T.L. (1960) : Fundamental of Population Studies, Lipineott, London.

B.SC. – II, SEMISTER – III

PAPER – XI

PRACTICAL GEOGRAPHY - V

Marks: 50 **Periods: 45** **[1.5 credits]**

Unit – I **(15)** [**0.5 credits**]

Earth, shape, size, area and great circle, co-ordinate system, plane spherical latitude, longitude direction and distance map design.

Unit – II **(15)** [**0.5 credits**]

Map Projection – Definition of Map Projection, Classification & necessity of Map Projection.

Unit – III **(15)** [**0.5 credits**]

Construction, Properties, Uses and choice of the following Map Projections:

1. Simple Cylindrical Projection.
2. Cylindrical Equal Area Projection.
3. Simple Conical Projection.
4. Conical Projection with Two Standard Parallel
5. Zenithal Polar Gnomonic Projection
6. Zenithal Equal Area Projection.

Recommended Books –

1. Monkhouse F.G. & Willinson H.R.: Maps and Diagrams, Methues, London, 1994.
2. Singh R.L. : Elements of Practical Geography, A Kalyani Pub. New Delhi.
3. Steers J.A. : Map Projections, University of London Press, London.
4. Bygoot J. : An Introduction to Map Work and Practical Geography, University Titorial, London, 1964.
5. Sarkar, A.K. : Practical Geography – A Systematic approach, Orient Longman, Culcutta, 1997.

B.SC. – II, SEMISTER – III

PAPER – XII

PRACTICAL GEOGRAPHY - VI

Marks: 50 **Periods: 45** **[1.5 credits]**

Unit – I **(15)** [**0.5 credits**]

Cartography – Definition, Nature and Scope of Cartography. Importance of Cartography.

Unit – II **(15)** [**0.5 credits**]

Representation of statistical data by using following Cartographic Techniques:

1. Climograph
2. Hythergraph
3. Star Diagram
4. Traffic Flow Cartogram
5. Cube Diagram
6. Erograph.

Unit – III **(15)** [**0.5 credits**]

Representation of statistical data by using following methods:

1. Line and Bar Graph
2. Divided Rectangle
3. Divided Circle
4. Proportional Circle
5. Dot Maps
6. Choropleth Maps

7. Isopleth Maps.

Recommended Books –

1. Pal S.K. : Statistics for Goe-sciences, Techniques and Application, Concept, New Delhi, 1998.
2. Misra R.P. and Ramesh : A Fundamentals of Cartography, McMillen Co. New Delhi, 1986.
3. Monkhouse F,J, : Maps and Diagrams.
4. Robinson A.H. : elements of cartography, John Waley and Sons, USA, 1995.
5. Singh and Kanoujia : Map Work and Practical Geography.

B.SC. – II, SEMISTER – IV
PAPER – XIII

OCEANOGRAPHY

Marks : 50 **Periods: 45** **Credits: 03**

Unit – I **(10)** [**0.6 credits**]

Introduction to Oceanography – Definition, Nature and Scope, Surface configuration of Ocean floors.

Unit – II **(10) [0.8 credits**]

Submarine Relief – General idea of submarine relief – Continental shelf, Continental slope, Abyssal plains, Oceanic trenches and deeps, Hypsographic Curve, Relief of Atlantic, Pacific and Indian Oceans.

Unit – III **(15) [0.8 credits]**

Salinity and Temperature of Oceanic Water – Salinity of ocean water, its meaning, causes of salinity, Factors affecting on salinity of oceanic water, Distribution of salinity in the World. Factors affecting the temperature of ocean water, Distribution of temperature in ocean water.

Unit – IV **(10)** [**0.6 credits**]

Marine Deposits and Coral Reefs –

Ocean deposits – Shallow sea deposits, Deep sea deposits, Types of Corals. Ocean as a storehouse of resources for the future.

Recommended Books –

1. Grald S. : General Oceanography – An Introduction, John Wiley & sons, New York, 1980.
2. Garrison T. : Oceanography, Words worth, Com. USA, 1998.
3. Sharma and Vithal : Oceanography.
4. Savindra Singh : Oceanography.
5. Davis Richard J. : Oceanography – An Introduction to Marine Environment, W.M.C. Brooth Flowa, 1987.
6. Hussain M. : Climatology and Oceanography.

B.SC. – II, SEMISTER – IV
PAPER – XIV

SETTLEMENT GEOGRAPHY

Marks : 50 **Periods: 45** **Credits: 03**

Unit – I **(10)** [**0.6 credits**]

Settlement Geography –
Nature, scope and content. Definition of rural and urban Settlements, merits and limitations.

Unit – II **(10) [0.8 credits**]

Settlement site and structure –
Internal Morphology, external forms, field patterns, Functions and house types.

Unit – III **(15) [0.8 credits]**

Spatial organization –

Size, spacing and hierarchy of settlements; emergence and characteristics of urban settlement.

Unit – IV **(10)** [**0.6 credits**]

Silent features of human settlements in India.

Recommended Books –

1. Bose A. : India's Urbanization 1947-2000, Tata McGraw Hill, New Delhi.
2. Carter H. : The Study of Urban Geography, Edward Arnold, London.
3. Chisholm M. (1972) : Rural Settlement and Land use, London.
4. Clot R.D. (1970) : Rural Geography, Pergaman Press, London.
5. Singh R.L. : Reading in Rural Geography. Banaras Hindu University, Varanashi.
6. Singh R.Y. (1994) : Geography of Settlement, Rawat Publication, Jaipur and New Delhi.
7. Turner Roy (1962) : Indian Urban Future, Oxford University Press, Bombay.

B.SC. – II, SEMISTER – IV

PAPER – XV

PRACTICAL GEOGRAPHY - VII

Marks: 50 **Periods: 45** **[1.5 credits]**

Unit – I **(15)** [**0.5 credits**]

Surveying – Definition and types of surveying according to the instruments used.

Unit – II **(15)** [**0.5 credits**]

Preparation of plans of the given area with following surveys-
(1) Plane Table Survey (2) Chain and Tape Survey (3) Prismatic Compass Survey. By using Radial Method, Intersection Method, Open and Close Traverse Method.

Unit – III **(15)** [**0.5 credits**]

Prismatic Compass Survey -
(1) Whole circle and reduced bearing.
(2) Examples on conversion of bearings.
(3) Local attraction and correction of bearing by using Bowditch Method.

Recommended Books –

(1) Singh R.L. – Elements of Practical Geography, Kalyani Publishers, New Delhi.

(2) Kanetkar T.P., Kulkarni S.V. (1987) – Surveying and leveling, Vidyarthi Grihi Prakashan, Pune.

(3) Negi B.S. – Practical Geography.

(4) Khan Z. A. – Text Book Practical of Geography.

B.SC. – II, SEMISTER – IV

PAPER – XVI

PRACTICAL GEOGRAPHY - VIII

Marks: 50 **Periods: 45** **[1.5 credits]**

Unit – I **(15)** [**0.5 credits**]

Introduction to Remote Sensing. Definition of remote sensing, types of sensors and platforms.

Unit – II **(15)** [**0.5 credits**]

Types of Aerial Photographs.
General equipments used in Air Photo Interpretation.
(1) Pocket Stereoscope (2) Mirror Stereoscope.
Visual interpretation of aerial photographs/imageries.

Unit – III **(15)** [**0.5 credits**]

Introduction to GIS and GPS.

Recommended Books –

(1) Barrett E.C. & Curtis E.C. (1992) – Fundamentals of Remote Sensing and Air Photo interpretation, McMillen, New York.

(2) Dickinson G.C. (1979) – Maps and Air Photographs, Arnold Publisher, New Delhi.

(3) Elbs P.S. – Principles of Remote Sensing.

(4) Floyed S. – Remote Sensing, Principles and Applications.

(5) Maguire David J. & Others (Ed)(1991) – Geographical Information System; Principles and applications, Vol.- I & II, Longman, London.

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY AURANGABAD.

FACULTY OF SCIENCE
Question Paper Pattern (Theory)
For B.Sc. III and IV semester Examination
Effective from Academic Year 2010-11 Progressively

The Question Paper for every paper in all the subjects (under Faculty of Science) will have 03 questions, each carrying 10 mark. The time duration for each paper will be 2 hours. The pattern of question paper for each paper in all the subjects will be as follows:

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

FACULTY OF SCIENCE

B. Sc. (_____ Semester)

Subject : _____

Paper : _____

Time : 2 hours *Max. Marks : 30*

N. B. :

(i) Attempt ***All*** question.

(ii) All questions carry equal marks.

(iii) Use only Blue or Black pen.

Q. 1. Attempt any ONE:

(a) 10

(b) 10

Q. 2. Attempt any ONE:

(a) 10

(b) 10

Q. 3. Attempt any ONE:

(a) 10

(b) 10

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

FACULTY OF SCIENCE

INTERNAL ASSESSMENT (20 Mark)

The pattern for every paper in all the subjects (under faculty of science) for Internal Assessment will be as follows:

B.Sc. III and IV Semester :

1. ONE CLASS TEST 10 Marks

2. ONE HOME ASSIGNMENT 10 Marks

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FACULTY OF SCIENCE

Question Paper Pattern (Practical)

B. Sc. Geography (_____ Semester)

Practical Paper : _____

Time : 2 hours Max. Marks : 50

Date : _____ Batch No. : _____

Centre : _____

Q. 1. ---------- 10

Q. 2. ---------- 10

Q. 3. ---------- 10

Q. 4. ---------- 10

Q. 5. Record book and viva – voce. 10